

Abstract of the Disclosure

This invention describes a blind speech user interference cancellation receiver for a high-speed downlink packet access (HSDPA). The key component of the blind SUIC receiver is a joint estimation on hard-decision HSDPA signals and soft-decision interfering speech user (ISU) signals with a full Walsh transform correlator used instead of the conventional RAKER, where the outputs are separated into two parts: the desired HSDPA signal with known spreading codes and the ISU signal with unknown spreading codes. The invention further describes a multistage processing for reaching a targeted convergence rate or a desired bit-error-rate for a received signal involving a hard-decision on the desired HSDPA signal and a soft-decision on the ISU signal.